Tree Removal Permit Evaluation

November 3, 2010

Department of Planning and Development

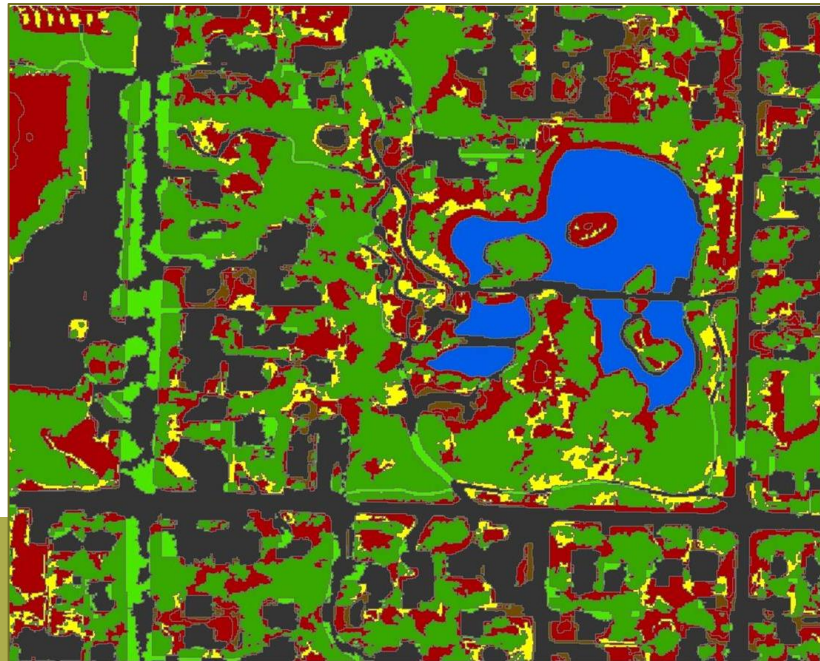
Outline of Preliminary Process

- Evaluating Existing Regulations
- Understanding Approaches in Other Cities
- Preliminary Input
- Establishing Goals & Principles
- Establishing Options
- Evaluating Options

EVALUATING EXISTING REGS

Canopy Cover Analysis

- 22.5% in 2003 → 22.9% in 2007
- Goal of 30% by 2037
- Slight increases across all areas except parks - both private property and ROW
- Redeveloped parcels
  - 2% of parcels
  - SF: 30% → 17%
  - MF: 17.7% → 5.4%
  - C: 6.5% → 4.3%



Lessons Learned from Existing Regulations

- Regulations outside of development must be coordinated with regulations during development
- Exceptional Tree focus has not resulted in substantial canopy cover preservation

Type of Area	Est. Ratio of Trees Protected
Subdividing Single Family	1 in 8 projects
Non-subdividing SF	1 in 75 projects
Lowrise	1 in 100 projects
Midrise	1 in 30 projects
Commercial	none

- Retained trees can have design impacts

Lessons Learned from Existing Regulations

- Single Family tree requirements have not resulting in substantial new planting
  - Allows retention of few trees or planting of small trees
  - On average, planting would result 16% canopy at maturity
- Green Factor – too early to judge, but generally robust planting

Challenges and Key Questions

- Also discussed at February UFC

UNDERSTANDING APPROACHES IN OTHER CITIES

Research on Existing Approaches

- Survey of 12 PNW municipalities
- 10 National study
  - San Francisco, Los Angeles, Sacramento, Milwaukee, Minneapolis, Chicago, Boston, Baltimore, DC
- Strict Codes
  - Athens County GA, Palo Alto, Pasadena, Denver
- Summary of Approaches memo

PRELIMINARY INPUT

Preliminary Input

- Emerald City Task Force (5 meetings)
- Environmental and Tree Advocates Stakeholders Meeting
- Urban Forest IDT workplan development
- Urban Forest Workshop
- UFC Regulatory Strategies Discussion-Feb
- UFC Management Committee – March, April, June
- City Tree Regulations Review Group

ESTABLISHING GOALS & PRINCIPLES

Goal of Proposal

To advance the goals of the Urban Forest Management Plan to maintain and enhance a thriving and diverse urban forest that maximizes the environmental, economic, and social benefits of trees, while recognizing other citywide goals and policies for sustainability and growth management relating to density, transportation, housing affordability, and urban design; and accommodating property owner's desires for solar access, solar energy, gardens, accessory structures, views, access, and risk management.

Key Principles

- Key infrastructure element
- Focus on benefit not burden
- Recognize other city-wide and property owner goals
- Coordinate regulations during and outside of development
- Understandable, enforceable, and fundable

ESTABLISHING OPTIONS

Permit Standards

- Prescriptive Removal Criteria (Redmond, Issaquah)
- Replacement Requirement (Lake Forest, Woodinville)
- Annual Limit (Kirkland, Shoreline)
- Construction Only (Bellevue, Tacoma, Olympia)
- Monitoring/Education Only (No examples)
- Financial Compensation (No examples)
- Subjective Removal Criteria (Palo Alto)

Permit Processes

- Notification only (No examples)
- No-review free online permit (No examples)
- More than X per year (Kirkland, Shoreline)
- Full reviewed permit (Redmond, Lake Forest)
- Hybrid (ex. exceptional trees only)

EVALUATING OPTIONS

Initial Thoughts

- Must evaluate permit standards, permit process and alternatives holistically
- Evaluation outline
  - Evaluating Permit Standards
  - Evaluating Permit Process
  - Evaluating Permit Option Overall
  - Evaluating Alternatives

Evaluating Permit Standards

- Impacts on the Urban Forest
- Impacts on property owners
- Impacts to management systems
- Equity

Permit Standards:
Prescriptive Removal Criteria Approach

- Maximum control over tree removal
- Difficult to balance trees with light access, gardens, aesthetics, views, etc.
- Requires lifetime protection of certain trees which is strong disincentive to allowing trees to grow
- Substantial fines is only way to enforce

Permit Standards:
Replacement Approach

- Maintains basic canopy cover
- More equitable for forested lots
- Allows gradual removal of large trees
- Cost = site plan + permit + inspection + replacement
- Replaced trees require maintenance to establish

Permit Standards:
Annual Limit Approach

- Limits clearing prior to development
- Spreads removal of multiple years

Permit Standards:
Construction Only

- Provides flexibility for property owners outside of development
- Can still address tree loss during development where greatest decline has occurred
- Lot can be cleared prior to development
- No tracking of tree removal outside development

Permit Standards:
Monitoring/Education Only

- Benefits of Tracking
  - Only useful if required for every tree
  - Data limited to number, diameter; species if done by tree care company
  - 100% margin of error
  - Doesn't approximate canopy cover
- Education
  - Only useful if done by property owner
  - Can help identify potential heritage trees
  - Can require professional cert for large trees

Permit Standards:

Financial Compensation

- Equity issue is very problematic
  - Disproportionally burdens poor
  - Financial cost for people with trees; none for people without
- Disincentive to letting trees grow

Permit Standards:

Subjective Removal Criteria

- No predictability
- Decision vary by reviewer
- Substantial costs for law
- Constitutional due process issues

Impacts to Urban Forest

- No cities with permits surveyed had data on canopy trends
- Difficult to approximate number of trees that might be retained or planted under any combination of permit standards and process

Impacts to Urban Forest:
Quantifying Tree Value

	Benefits	Costs
Public	• Stormwater mitigation • Air cleaning • Carbon sequestration • Habitat • Heat Island	• Curbside leaf collection • Damage to sidewalks
Individual	• Property value increase to aesthetics • Aesthetics • Increased retail traffic • Energy reduction in Summer	• Property value decrease due to views • Planting costs • Maintenance (pruning, watering) • Leaf removal (collection, gutters, fuel costs) • Tree removal costs • Fear of large trees • Energy increase in winter • Damage due to tree fall or branch lost • Damage due to roots impacting foundations, driveways, pipes

Impacts to Urban Forest:
Quantifying Tree Benefit

Statistic	Citywide	
	Current	*30-year Goal*
Acres in MU	54,324	
MU as % of City land base	100%	
Canopy coverage	18%	30%
Number of trees	1,377,500	2,026,600
Plantings needed		**649,100**
One-time cost of plantings		**$114,200,000**
Maintenance Costs (yr)	$14,054,300	$21,116,300
Benefits (yr)		
Stormwater Mitigation Value (yr)	**$20,643,000**	**$30,215,000**
Air Cleaning Value (yr)	**$4,894,000**	**$7,047,000**
Carbon Sequestration (Tons CO_2)	**52,400**	**77,066**
Carbon Sequestration (Value $)	**$1,584,000**	**$2,331,000**
Other Benefits (Energy, Aesthetics, & etc)	**$17,237,300**	**$26,342,300**
Net Benefit (All Benefits - All Costs) (yr)	$30,304,000	$44,585,000

**All values are based upon estimates and currently accepted models (McPhearson et al. 2002)*

Impacts to Property Owners

- Potential education if permit done by homeowner
- Potential loss of flexibility to balance trees with light access, gardens, solar panels, damage to property
- Potential decrease property value
- Increased maintenance cost
- Cost of time & money

Equity

- How would this impact people of different incomes
- How would this impact people with trees vs. people without trees

Evaluating Permit Process

- Effectiveness
- Enforceability
- Administrative Costs
  - Permit, enforcement, law, citizen assistance, web development & support
- Unintended consequences
  - Focus on large trees provides incentive to remove before they get large

Evaluating Overall Permit Option

Pros	Cons
• Provides greater control of tree removal • **Opportunity for education re: alternatives to removal** • **Opportunity to require new planting** • Allows tracking over time • **Impediment may force some applicants to reconsider tree removal** • Would support implementation of existing ECA regulations	• **Limits property owner ability to manage solar access, gardens, accessory structures, views, access, maintenance, etc.** • **Disincentive to new planting, preservation of small/med trees** • **Difficult to enforce – still depends on complaints, hard to prove a case post-removal** • **Cost of permits - $680K+/year** • Enforcement costs (inspectors + arborists + court cases), penalties • Equity issue – hard for immigrants & poor to know regs, pay fines

Evaluating Alternatives:
Baseline

- 22.5% in 2003 → 22.9% in 2007
- Goal of 30% by 2037
- Since 2007,
  - 2 for 1 tree replacement
  - Increase street tree planting
  - Stormwater standards
  - Stormwater rates
  - Trees for Neighborhoods
  - Neighborhood Tree Stewards
  - Green Seattle Partnership
  - Releaf Campaign
  - K-12 Education

Additional Measures

- Private Property Tree Regulations
- Street Tree Regulations
- Stormwater rate incentive
- Education Coordinator
- Additional Education Opportunities
- Additional Incentives – subsidized trees, tree job corp, technical assistance

Overall Assessment

- Complex, Non-quantifiable Decision
- Assessment Varies by Standard/Process

- Limited Effectiveness
- Limited Enforcement Potential
- Inflexibility for Property Owners
- Cost
- Effective Alternatives